

**ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM**

Plant Abstract

Element Code:

PDCAR0U1F0

Data Sensitivity:

No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Silene rectiramea*

COMMON NAME: Grand Canyon Catchfly; Straight Branched Catchfly; Campion

SYNONYMS:

FAMILY: Caryophyllaceae

AUTHOR, PLACE OF PUBLICATION: B.L. Robinson, 1899. Botanical Gazette 28:134.

TYPE LOCALITY: Grand Canyon of the Colorado, 7000 ft., Arizona, U.S.A.

TYPE SPECIMEN: NY 342652, D.T. MacDougal 181. 28 June 1898. In flower.

TAXONOMIC UNIQUENESS: A distinct species in a genus of about 500 species with a wide geographic range, especially the Mediterranean region.

DESCRIPTION: A perennial herb 20-40 cm tall with opposite, linear leaves. The five white to lavender-pink petals, veined with light purple, are shallowly bilobed, about 1 cm long. Plant is very sparsely glandular (Phillips 1993).

AIDS TO IDENTIFICATION: Although *Silene rectiramea* is closely related to *S. verecunda*, *S. rectiramea* differs in its elongated, straight branches, as well as the structure of its delicate papery calyx, which shows no indication of constriction about the carpophore (the part of the flower receptacle which extends between and attaches to the carpels) as in *S. verecunda*. Hitchcock and Maguire (1947) state that *S. rectiramea* has the following unique floral peculiarities: "short, papery, very sparsely glandular calyx; nonciliate calyx lobes, short claws that are but minutely puberulent; short blades, and minute appendages." Phillips (1993) states that the stem is not sticky.

ILLUSTRATIONS:

TOTAL RANGE: Coconino County, Arizona.

RANGE WITHIN ARIZONA: Coconino County: Bright Angel Trail in Garden Creek, vicinity of Hermit's Rest on the South Rim of the Grand Canyon, and upper Waldron Basin in upper Hermit Canyon, and along New Hance Trail in Red Canyon.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Perennial herb

PHENOLOGY: Flowers late April to May, fruiting May to June.

BIOLOGY: Very little is known about the biology of this plant.

HABITAT: Cold dry climate: average annual precipitation of 36.72 cm. Average yearly frost-free days: 148.

ELEVATION: 5,600 - 6,800 ft. (1708 - 2074 m).

EXPOSURE: North facing.

SUBSTRATE: Limestone, Toroweap and Supai formation. Moderately deep and deep, gravely or cobbly loam to clayey soils on limestone and calcareous sandstone (U.S. Department of Agriculture, 1972).

PLANT COMMUNITY: *Juniperus-Pinus* in the Hermit's Rest area and *Pinus* woodland at the Bright Angel trail head. 200 feet below the Hermit's Rest Point, the species was found in the Sonoran-Chaparral habitat (Bailey's 1935 collection). Per Brian (1999), "it says Sonoran-Chaparral habitat on Baileys's 1935 collection label, but this is wrong. Today, it is in Pinyon-Juniper Woodland."

Associated species include: *Amelanchier utahensis*, *Artemisia tridentata*, *Pinus edulis*, *Juniperus osteosperma*, *Ptelea trifoliata*, *Chamaebatiaria millefolium*, *Fendlera rupicola*, *Berberis fremontii*, *Gutierrezia sarothrae*, and *Poa* sp.

POPULATION TRENDS:

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None (USDI, FWS 1996)
[C2 USDI, FWS 1990]

STATE STATUS: None

OTHER STATUS: None

MANAGEMENT FACTORS: There are no specific management practices or plans which pertain to *Silene rectiramea* although plants may not be removed, destroyed or collected from Grand Canyon National Park without prior permission from the Superintendent (Brian, 1982).

CONSERVATION MEASURES TAKEN: Protected by virtue of location in Grand Canyon National Park.

SUGGESTED PROJECTS: Surveys should be made for *Silene rectiramea* to determine the status of the species.

LAND MANAGEMENT/OWNERSHIP: National Park Service, Grand Canyon National Park.

SOURCES OF FURTHER INFORMATION

LITERATURE CITATIONS:

- Brian, N. and B. G. Phillips. 1982. Unpublished status report, *Silene rectiramea*, for US Fish and Wildlife Service.
- Brian, N. 1999. Personal communication in review of AGFD, HDMS draft abstract of *Silene rectiramea*.
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- Kearney, T. H. and R. H. Peebles. 1960. Arizona flora (with supplement). University of California Press. Berkeley. p.302.
- Lehr, J. H. 1978. A catalogue of the flora of Arizona. Desert Botanical Garden, Phoenix, Arizona. p.53.
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- Rutman, S. 1992. Handbook of Arizona's endangered threatened, and candidate plants. Compiled for U.S. Fish and Wildlife Service, Phoenix, Arizona. p.57.
- USDA, Soil Conservation Service. 1972. General soil map of Coconino County, Arizona.
- USDI, Fish and Wildlife Service. 1990. Endangered and Threatened Wildlife and Plants; Review of Plant Taxa for Listing as Endangered or Threatened Species. Notice of Review. Federal Register 55(35):6225.
- USDI, Fish and Wildlife Service. 1996. Endangered and Threatened Wildlife and Plants: Review of Plant and Animal Taxa that are Candidates for Listing as Endangered or Threatened Species. Notice of Review, Proposed Rule. Federal Register 61(40):7595-7613.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

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- B. Maguire - New York Botanical Garden,. Bronx.
- Nancy Brian - NPS, Grand Canyon National Park, Flagstaff, AZ.

ADDITIONAL INFORMATION:

"Species had not been seen/collected since 1935, but was collected in 1992-1993 and 1998 by Grand Canyon National Park Staff" (Rutman, 1992 and Brian 1999).

Revised: 1993-11-09 (DBI)
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